UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09,225,486	01/06/1999	MITSUHIRO UCHIDA	Q52871	2417

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EXAMINER
HANNETT, JAMES M

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/225,486	UCHIDA ET AL.
	Examiner	Art Unit	
	James M Hannett	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 March 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>2,3,10,13,15 and 17-27</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>2,3,10,13,15 and 17-27</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>12 November 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/7/2005 has been entered.

Response to Arguments

Applicant's arguments filed 3/7/2005 have been fully considered but they are not persuasive.

The applicant argued that the examiner interprets the 8x8 blocks in Abe to correspond to the thumbnail image signals. The applicant further submits that one of the blocks of pixels in Abe does not represent an image which is duplicative of its respective image.

The examiner disagrees with the applicants assertion that the examiner views the 8x8 block of pixels to correspond to the thumbnail image. Abe teaches that an image is compressed by dividing a high resolution image into a plurality of 8x8 blocks of pixels. Furthermore, Abe teaches that all of the pixels in a given 8x8 block are averaged to get an average value which is characteristic of the 8x8 block of pixels. The examiner views the characteristic average value of the 8x8 block of pixels to represent one pixel of a thumbnail image. The examiner views the thumbnail image to be the image formed after all of the 8x8 blocks of pixels are averaged to form a corresponding average pixel value.

The applicant argues that Terashita does not teach calculating the total average of averages of digital image signals. The examiner disagrees with the applicant and asserts that Terashita teaches on Column 16, Lines 36-61 that a plurality of image frames are selected to calculate a first average image data on a plurality of original images. Furthermore, Terashita teaches that a tricolor average density $(R+B+G)/3$ can be calculated based on the first average image data. Therefore, Terashita teaches extracting the characteristic value is a total average of averages of the digital image signals.

Applicant's arguments, see the amendment, filed 3/7/2005, with respect to the rejection(s)of claim(s) 10 and 13 under Terashita in view of Saito have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Nakamura in view of Terashita.

The applicant disagreed with the examiners taking of official notice to Claims 23-25 and requested that the examiner provide references supporting the official notice. The examiner has provided a reference supporting the official notice and has incorporated the reference into the rejection of Claims 23-25 of this office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1:   Claims 15, 17, 22 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,568,194 Abe.

2:      In regards to Claim 15, Abe teaches in the abstract an image processing method for

carrying out white balance (image processing) on a digital image signal. Abe teaches the use of

extracting the luminance signal from digital image signals from two images of subjects

photographed by a digital camera. Abe further teaches the use of carrying out image processing

according to the luminance value on the digital image signals to perform a white balance

adjustment. Abe teaches in the abstract the use of extracting the luminance signal from digital

image signals from two images of subjects photographed by a digital camera. Abe teaches on

Column 3, Lines 25-44 that the luminance signal is extracted from an image wherein pixel data

from an original image is divided into N blocks, each of which is composed of an 8X8 matrix of

pixels. Abe teaches on Column 3, lines 59-65 that a luminance comparison function is performed

that gives the difference between the luminance signals of the two images. Abe teaches that the

difference is calculated by comparing a representative pixel for each block which corresponds to

the average luminance value of the block. The process of taking 8X8 pixel blocks and averaging

the pixel values to obtain a single average luminance value reduces the number of pixels and is

viewed as a thumbnail image. Abe teaches capturing two images and dividing each image into

blocks of 8X8 pixels. Abe further teaches averaging all the pixels within a given block to obtain

an average luminance value of the block. This process reduces the number of pixels in the image

by a factor of 64. These thumbnail images are then compared on a pixel-by-pixel basis to obtain

the luminance difference signal. Therefore, each of the thumbnail image signals (the two input

images after averaging of the 8x8 blocks) comprises a reduced size image of its respective image

of a plurality of images. Abe teaches on Column 3, lines 59-65 each of the thumbnail image

signals produces an image duplicative of its respective image of the plurality of images and

having a reduced physical appearance in relation to its respective image of the plurality of

images.

3:      As for Claim 17, Abe teaches in the abstract the use of recording means or memory for

recording the digital image signals to memory.

4:      In regards to Claim 22, Abe teaches on Column 3, lines 59-65 and in the abstract that

each of the plurality of images is stored as one image file. Abe teaches that the two images are

captured separately and correspond to an image captured with a flash and without a flash.

Therefore, it is inherent that the two images be stored separately.

5:      In regards to Claim 26, Abe teaches on Column 3, lines 59-65 the digital image signals

comprise the thumbnail image signals. The digital image signals are viewed as the pixels, and the

pixels comprise the thumbnail image.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6:      Claims 2, 3, 19, 20 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by

USPN 5,767,983 Terashita.

7:      As for Claim 2, Terashita teaches on Column 4, Lines 12-33 an image processing method

for carrying out image processing on a digital image signal. Terashita teaches the method of

extracting film characteristic data from image signals from a plurality of image frames. Terashita

further teaches the use of carrying out image processing according to the characteristic value on

the digital image signals. Terashita teaches on Column 7, Lines 15-66 and on Column 10, Lines

26-39 that when each of the digital image signals is composed of RGB color signals, the

characteristic data is a total average of averages of the digital image signals. Terashita further

teaches the method of converting RGB color signals in a digital image signal representing an

image of a gray subject to be equalized, based on the total average. Terashita teaches on Column

3, Lines 5-21 an image processing method wherein an average density is multiplied by a

weighting factor. Terashita teaches on Column 7, Lines 6-16 that the weight-factors can be set

predetermined weighting coefficients. Terashita teaches on Column 16, Lines 36-61 that a

plurality of image frames are selected to calculate a first average image data on a plurality of

original images. Furthermore, Terashita teaches that a tricolor average density (R+B+G)/3 can be

calculated based on the first average image data. Therefore, Terashita teaches extracting the

characteristic value is a total average of averages of the digital image signals. Terashita teaches

on Column 4, Lines 43-47 that each of the digital image signals is stored as an image file.

8:     In regards to Claim 3, Terashita teaches on Column 16, Lines 6-22 that when the digital

image signals are composed of RGB color signals, photometric data for each color signal in each

pixel in each of the digital image signals is calculated. Terashita teaches on Column 24, Lines 6-

20 that weighting coefficients can be set respectively to characteristic data which is data from the

photometric data.

9:     As for Claim 19, Terashita teaches on Column 4, Lines 12-33 an image processing

method for carrying out image processing on a digital image signal. Terashita teaches the method

of extracting film characteristic data from image signals from a plurality of image frames.

Terashita further teaches the use of carrying out image processing according to the characteristic

value on the digital image signals. Terashita teaches on Column 16, Lines 36-61 that a plurality

of image frames are selected to calculate a first average image data on a plurality of original

images. Furthermore, Terashita teaches that a tricolor average density $(R+B+G)/3$ can be

calculated based on the first average image data. Therefore, Terashita teaches extracting the

characteristic value is a total average of averages of the digital image signals. Terashita teaches

on Column 4, Lines 43-47 that each of the digital image signals is stored as an image file.

10:     As For Claim 20, Terashita teaches on Column 4, Lines 12-33 an image processing

method for carrying out image processing on a digital image signal. Terashita teaches the method

of extracting film characteristic data from image signals from a plurality of image frames.

Terashita further teaches the use of carrying out image processing according to the characteristic

value on the digital image signals. Terashita teaches on Column 7, Lines 15-66 and on Column

10, Lines 26-39 that when each of the digital image signals is composed of RGB color signals,

the characteristic data is a total average of averages of the digital image signals. It is viewed by

the examiner that the total average of the average of all three of the color signals into a single

color signal represents the brightness of the pixels. Terashita teaches on Column 4, Lines 43-47

that each of the digital image signals is stored as an image file.

11:     As for Claim 27, Terashita teaches an extracting process of obtaining the image data and

an image processing process of weighting the averages these are different processes and are

therefore viewed as being performed separately.

12:   Claim 10 is rejected under 35 U.S.C. 102(e) as being anticipated by USPN 5,917,578

Nakamura.

13:    In regards to Claim 10, Nakamura teaches in the abstract and on Column 3, Lines

41-45 an image processing method of carrying out image processing on a digital image signal,

Nakamura teaches the image processing method comprising: extracting a characteristic value

representing a characteristic of an image sensing device from digital image signals of a plurality

of images of subjects photographed by the image sensing device Column 4, Lines 37-60 and the

abstract; Nakamura teaches on Column 9, Lines 45-57 carrying out image processing according

to the characteristic value on the digital image signals; Nakamura teaches on Column 8, Lines

42-62 the characteristic value, when each of the digital image signals is composed of RGB color

signals, is a value regarding chroma of each of the digital image signals and the image

processing converts the chroma of the digital image signal, based on the characteristic value.

Nakamura teaches a system which converts image data captured on film into digital images using

a CCD image sensor. Nakamura teaches that the system will optically read image data, which

corresponds to data, which allows the system to differentiate between the types of cameras used

to capture the images. Furthermore, Nakamura teaches that the read characteristic data can be

used to correct chromatic aberrations in the image. Therefore, Nakamura teaches performing

converting the chroma information of the digital images based on the value read out from the

characteristic value extracting means.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14: Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,568,194

Abe in view of USPN 5,682,573 Ishikawa et al.

15: As for Claim 18, Abe teaches the claimed invention as discussed in Claim 17, Abe does

not teach the use of recording a flag indicating whether or not the digital image signal has been

corrected after photographing in the recording medium together with the digital image signal.

Abe further does not teach the method of extracting the characteristic value and performing

image processing only on signals having the flag.

Ishikawa et al teaches on Column 20, Lines 35-51 a correcting operation wherein a flag

indicating whether or not a digital image signal has been corrected after photographing in the

recording medium together with the digital image signal. Ishikawa et al further teaches the

method of extracting the characteristic value and performing image processing only on signals

having the flag present.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to add the flag indicating method of Ishikawa et al to the signal processing

method of Abe in order to allow the method of extracting the characteristic value and performing

image processing only on signals having the flag present.

16: Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,917,578

Nikamura in view of USPN 5,767,983 Terashita.

17:    In regards to Claim 13, Nikamura teaches the claimed invention as discussed in Claim 10.

However, Nikamura does not teach that the characteristic value is found based on the digital

image signal from which high saturation pixels have been eliminated.

Terashita teaches on Column 40, Lines 30-37 that it is advantageous that a characteristic

value is found based on digital image signals from which high saturation pixels have been

eliminated. Therefore, improving the image quality.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to extract the characteristic value in Nikamura found based on digital image

signals from which high saturation pixels have been eliminated as taught by Terashita in order to

improve image quality.

18:   Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN

5,767,983 Terashita in view of USPN 5,917,578 Nakamura.

19:    As for Claims 23-25, Terashita teaches an image processing method that performs image

processing on digital image signals that were scanned from film based on an extracted

characteristic value from the image data. However, Terashita does not teach that the image

processing can be performed based on an extracted characteristic value that corresponds to tone

and sharpness.

Nakamura teaches on Column 11, Lines 17-18, Column 9, Lines 52-57 and Column 3,

Lines 25-56 a system which analyzes digitized images and extracts characteristic values from the

image data that is related to the type of camera used to capture the images. The system extracts

the data and performs image processing on the data to improve the image quality and correct for

fuzziness, reduction in contrast, and tone information characteristics. Nakamura teaches that

performing this processing improves image quality. Furthermore, characteristic data extracted

from the image data which allows a system to improve contrast and tone is data related to

sharpness and tone.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to enable the image processing apparatus of Terashita to extract (from the

captured images) the characteristic data of Nakamura in order to allow the image processing

apparatus to correct for tone and sharpness as taught by Nakamura in order to improve image

quality.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to James M Hannett whose telephone number is 571-272-7309. The

examiner can normally be reached on 8:00 am to 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wendy Garber can be reached on 571-272-7308. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James M. Hannett

Examiner
Art Unit 2612

JMH
April 13, 2005

WENDY R. GARBER
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